

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization  
International Bureau



(43) International Publication Date  
3 January 2002 (03.01.2002)

PCT

(10) International Publication Number  
**WO 02/01449 A1**

(51) International Patent Classification<sup>7</sup>: **G06F 17/60**

(74) Agent: **GREENE-KELLY, James, Patrick**; Lloyd Wise,  
Tanjong Pagar, P.O. Box 636, Singapore 910816 (SG).

(21) International Application Number: **PCT/SG00/00186**

(22) International Filing Date:  
10 November 2000 (10.11.2000)

(25) Filing Language: **English**

(26) Publication Language: **English**

(30) Priority Data:  
200003645-9 29 June 2000 (29.06.2000) **SG**

(71) Applicant (for all designated States except US):  
**ICO-OP.NET PTE LTD.** [SG/SG]; 1557 Keppel Road,  
#03-25 Blk B, Cantonment Central, Singapore 089066  
(SG).

(81) Designated States (national): AE, AG, AL, AM, AT, AU,  
AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ,  
DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR,  
HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,  
LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ,  
NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM,  
TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW.

(84) Designated States (regional): ARIPO patent (GH, GM,  
KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian  
patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European  
patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE,  
IT, LU, MC, NL, PT, SE, TR), OAPI patent (BF, BJ, CF,  
CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

**Published:**

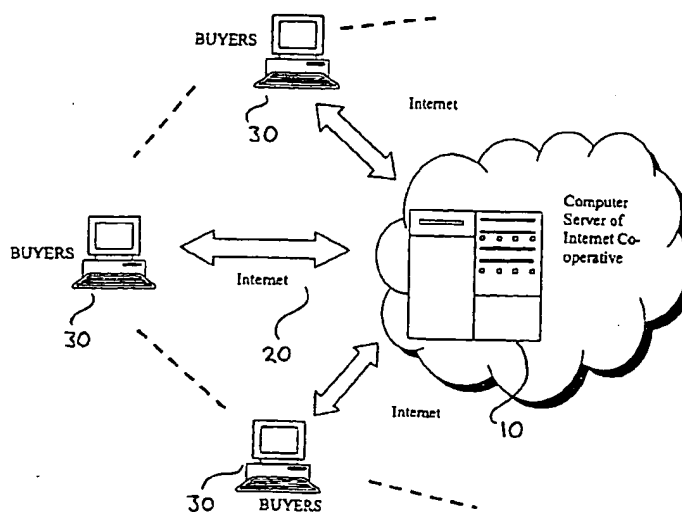
— with international search report

(72) Inventor; and

(75) Inventor/Applicant (for US only): **NG, Kok, Loon**  
[SG/SG]; 11 Gilstead Road, #02-04 Morimasa Gardens,  
Singapore 309065 (SG).

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: **A METHOD OF AND APPARATUS FOR CONDUCTING COMMERCE USING AN ELECTRONIC NETWORK**



(57) Abstract: The present invention provides a method and system for internet co-operative to provide savings to buyers who are members in the form of discounts and discounts comprising three components, namely: (a) sliding discount for volume demands of a particular product model; (b) discount for volume demands of products of the same brand; (c) and discount for total volume demands of all products of the internet co-operative. The information on current savings and the incremental demands needed to reach the next higher level of discount are presented in real-time to the buyers. The present invention also provides a method and system which allow buyers to complete their current electronic transactions at the logged-on web-site uninterrupted while applying for other services like credit, loan, insurance, trade-in and so on which are provided by other hyper-linked web-sites.



**WO 02/01449 A1**

## A METHOD OF AND APPARATUS FOR CONDUCTING COMMERCE USING AN ELECTRONIC NETWORK

### 5 Background and Field of the Invention

The invention relates to the method and apparatus for the conduct of co-operative commerce using the electronic networks such as, but not limited to, the internet.

- 10 A method which allows unrelated buyers to group their demands together for the purpose of obtaining lower prices using electronic network means such as the internet has been proposed. In this proposal, the buyers are able to group their demand for a same particular model of product, such as a particular model of car. The final volume discounted price of the particular product model is then calculated on the aggregated demand for that particular
- 15 product model. A limitation of this proposed method is that the first buyer who confirms the on-line purchase for the particular product model may have to face the possibility that there may not be enough number of buyers of the same product model who might join him to achieve the number needed to get the desired price.
- 20 Improved methods of aggregating demand have since been proposed. These include features such as allowing a potential buyer to specify exactly at or below what discounted price (i.e maximum price) the buyer would be willing to confirm his purchase. If the desired price is not achieved because there is insufficient demand at a closing time, the buyer is free to walk away with no obligation. Other improvements provide suppliers with
- 25 information on the current aggregated demands for a particular product model so that suppliers can make an informed decision to lower their prices to increase their yield. Some other demand aggregation proposals also allow on-line merchants to bid for the supply of the aggregated demand after the closing time so that the on-line merchant with the lowest bid will secure the order and the buyers will get the lowest price. This proposal is referred
- 30 to as a "reverse auction".

It is a disadvantage of all these proposals, however, that any discount is based on a single threshold for purchases of a single product model which must be reached in order for the discount to apply and thus the schemes using the proposals are not sufficiently attractive to  
5 many prospective purchasers to encourage them to use the schemes.

Many one-stop shopping web sites offer the buyer the option of applying for on-line credit and financial facilities to finance their on-line purchases. The buyer is required to provide detailed and confidential personal information during the on-line application. This is  
10 always tedious and time consuming. Usually, the buyer is required to switch from the current log-on web-site to the web-site of the bank or credit company to apply for such credit or financial facility. The web-site of the bank or credit company is then described as being hyper-linked to the log-on web-site of the one-stop shopping web-site. Surveys  
15 showed that in such cases, when the buyer switches to another hyper-linked web-site, the buyer is unlikely to return to the original one-stop shopping web-site where he first logged-on, which is disadvantageous since the shopping web-site no longer has the attention of the customer.

#### Summary of the Invention

20 According to the invention in a first aspect, there is provided apparatus arranged to conduct commerce using an electronic network comprising a network location including a database of products to be offered for sale accessible to the purchaser; a discount calculation means arranged to calculate a discount on purchases made by a purchaser via the network location  
25 and wherein the discount calculated by the discount calculation means has at least two components, each component being a different function of demand for products sold via the network location.

According to the invention in a second aspect, there is provided a method of conducting  
30 commerce using an electronic network comprising the steps of: providing a network

location accessible to potential purchasers at which a plurality of products are offered for sale; offering a discount on purchases made by a purchaser via the network location and wherein the discount has at least two components, each component being a different function of demand for products sold via the network location.

5

According to the invention in a third aspect, there is provided apparatus arranged to conduct commerce using an electronic network comprising a network location accessible to the purchaser including a database of products to be offered for sale; a discount calculation means arranged to calculate a discount on purchases made by a purchaser via the network  
10 location and wherein the discount is calculated by the discount calculation means by aggregating the purchases of more than one product model and calculating the discount on the basis of the aggregated purchases.

According to the invention in a fourth aspect, there is provided a method of conducting  
15 commerce using an electronic network comprising the steps of providing a network location accessible to potential purchasers at which a plurality of products are offered for sale; aggregating the purchases of more than one of the products; calculating a discount for the aggregated purchases; and passing the discount on to the purchasers of the aggregated products.

20

According to the invention in a fifth aspect, there is provided apparatus arranged to conduct commerce using an electronic network comprising a network location accessible to potential purchasers including a database of products to be offered for sale accessible to the purchaser; a discount calculation means arranged to calculate a discount on a purchase  
25 made by a purchaser via the network location and wherein the discount increases as a function of volume of purchases of the product.

According to the invention in a sixth aspect, there is provided a method of conducting commerce using an electronic network comprising the steps of providing a network  
30 location accessible to potential purchasers at which a product is offered for sale; calculating

a discount for the product and passing the discount on to the purchasers of the product; and wherein the discount increases as a function of volume of purchases of the product.

The described embodiment of the invention provides a method and apparatus which allow  
5 unrelated buyers (who may be from different global locations or counties) of different product models and of different brands to group together to form an internet co-operative for the purpose of getting volume savings which is usually better than that which individual buyers would get if they were to buy alone. The volume savings achieved by the internet co-operative comprises at least one of three components of saving, namely: (1) a discount  
10 for volume purchases of products of the same brand or supplier; (2) a discount for total volume purchases of all products of the internet co-operative; and (3) a sliding discount for volume purchases of a particular product model.

The described embodiment provides the means and apparatus to determine, show and  
15 inform the buyers of on-line and real-time information such as the discounted price, current discounts (for aggregated brand and total demands) and the incremental demands needed to reach the next higher level of discounts. The means and apparatus to facilitate an electronic transactions in the form of purchases or requests by buyers is also disclosed.

20 According to the invention in a seventh aspect, there is provided apparatus arranged to conduct commerce using an electronic network, the apparatus comprising a network location including a database of products to be offered for sale accessible to a purchaser connected to the network location; a transaction means arranged to process a purchase request by the customer and to provide an indication of at least one service available in  
25 association with the purchase; and a message sending means arranged to send the purchaser a separate message including information concerning a selected service while keeping the purchaser connected to the network location.

According to the invention in an eighth aspect, there is provided a method of conducting  
30 commerce using an electronic network comprising the steps of providing a network

location accessible to customers at which a product is offered for sale and, in response to a purchase request by the customer, providing an indication of at least one service available in association with the purchase; and sending the purchaser a separate message including information concerning the service while keeping the purchaser connected to the network  
5 location.

The service is preferably a financial service such as credit, hire purchase or insurance.

10 The described embodiment provides the means and apparatus to allow the internet co-operative to provide on-line application of credit, insurance, trade-in and other financial services at a time convenient to the buyer in such a way so as to keep the buyer at the current logged-on web-site of the internet co-operative to allow the buyer to complete the current electronic co-operative transactions (i.e. purchases or requests) uninterrupted. The  
15 buyer is allowed to select the specific on-line services (i.e. credit, insurance, trade-in and so on) that the buyer needs while when completing the current electronic co-operative transaction (i.e purchase or request) at the current internet co-operative web site and an electronic message such as an email will automatically be sent to the buyer, which contains an electronic link such as a URL address, to the web-site which will allow the buyer to  
20 apply for the requested service on-line at any later convenient time. The buyer then can apply for the requested on-line service at any time by clicking on to the URL address which will bring him to the web-site providing the requested service. In another form, the URL address may be embedded in the logo of the company of the web-site so that the logo of the company instead of the URL address is sent automatically to the buyer in the electronic  
25 message or email.

### Brief Description of the Drawings

An embodiment of the invention will now be described, by way of example, with reference to the accompanying drawings, in which:

5

Figure 1 is a schematic diagram of an embodiment of the invention;

Figure 2 illustrates the structure and mode of operation of an internet cooperative website forming part of the embodiment of the invention;

Figure 3 illustrates the pricing mechanism for determining the discounted prices of specific product models;

10

Figure 4 illustrates the mechanism for aggregating the total sales of all models of a particular kind of product of the same brand;

Figure 5 illustrates the mechanism for determining and displaying in real time the discounts for different kinds of products of the same brand;

15

Figure 6 illustrates the mechanism for determining and displaying in real time, the discounts for the internet co-operative.

Figure 7 illustrates an exemplary display screen ;

Figure 8 shows the discount display portion of the display screen of Figure 7 in more detail.

Figure 9 illustrates an exemplary screen showing the display of savings of individual buyers; and

20

Figure 10 is a flowchart illustrating how URLs are sent to buyers who have selected on-line application of facilities.

### Detailed Description of the Preferred Embodiment

25

The following definitions will be used throughout this specification:

Internet --- means an electronic network used to connect different terminals, devices and computers at different geographical locations together

30

Product model---means a specific product model of a particular specification and description

Product---means either a product or service

5

Brand:---means the mark or name representing the manufacturer or supplier of a particular group of products

Demand---means purchase or request for products by buyers

10

Market Price---means the price of a product model offered in the open market

Discounted Price---means the price which is discounted or lower than the market price

15 Hyper-link---means the linking of web-site sites by electronic network means such as the internet

Server--- means the computer system of the internet co-operative on which the software of this patent is coded and stored

20

URL address---means uniform resource locator which is the addressing scheme on the internet to locate internet resources or web-sites.

25 Electronic transactions---means electronic purchases or requests or any other applications made by buyers using an electronic network to the internet co-operative

Email---means electronic mail which involves the sending of a message or file from one computer account to another using the internet.



Web-site---means the location of the web pages such as the world wide addresses or, more commonly shortened as "www", where one can go using the internet

5 The overall system of preferred embodiment of the invention is shown in Figure 1. Buyers are connected to a server computer 10 or system controller of an Internet co-operative which provides a discount – related product purchasing service, by means of the electronic network means such as the Internet 20. The buyers may be located at different geographical locations or countries.

10 The buyers are connected on-line to the system using electronic terminals 30 such as computers, laptops, PDAs, thin-clients, webTVs, two way TVs, WAP mobile phones, or any other devices which the buyers can use to interact (i.e. view information and provide inputs) with the server computer 10 of the Internet co-operative. Buyers can view and make purchases or requests for the products using any of the electronic terminals 30.

15 The server computer or system controller of the Internet co-operative is a computer or controller system in which the software of this invention is coded and stored and which interfaces with prospective buyers via a network location such as a web site. The structure and operational functionality of the web site is shown in Figure 2.

20 The web site includes two databases, a customer information database 50 and a product information base 60. The web site, when accessed over the worldwide web, provides a login 100 which leads to a home page 102. The home page can then be used to access customer information pages 104, such as a customer account summary, information on how  
25 the internet cooperative works, frequently asked questions, guarantees, terms of conditions, privacy policy, information about the internet co-operative, news, partner information, contact information, feedback, customer forum and such like. Particularly for the account summary information, information from database 50, which includes information about customers of the internet co-operative and their respective levels of discount earned, can be  
30 confidentially accessed by the customers themselves.

The home page 102 further provides access to a plurality of product-related pages, in particular a plurality of product category pages 105 which provide details of products to be purchased, enabling the user to make a request for purchase of a particular product by selecting a brand and product model at 106 which leads to a display of product information 107 by access to information in product database 60, a page 108 for entry of an order, and a page 109 for the confirmation of an order including method of payment, acceptance of terms and conditions and providing an option for subsequent access to credit or other financial services.

10

After accessing the product screens or the customer screens, the web site may loop back to the home page 102, back to any product screen or customer screen, or allows a logout option at 110.

15 The internet co-operative offers discounted prices to the buyers on the condition that the forecasted aggregated minimum number of demands of that particular product model is achieved on the closing date of a buying cycle. If a buyer wishes to join in the co-operative to purchase a particular product model because the offered discounted price is attractive to him, he can register as a buyer and proceed to enter his purchase order electronically via the internet. The offered discounted price is conditional on achieving the forecasted number of demands. If the number or volume is not achieved on the closing date of the buying cycle, the buyer is free to walk away from the purchase. When the buyer registers his purchase, each incremental purchase is used by the mechanism as described hereinafter to determine additional savings given to members in the form of discounted prices and further aggregated discounts for aggregated brand and total demand. The discounted price, further discounts and the incremental demands needed to reach the next higher level of discounts are calculated, updated and fedback immediately by the web site to the buyer on-line and in real-time via the internet.

25

The actual design and layout of how the above information as displayed on the electronic terminals of the buyers is not an important feature of this invention and may be chosen in dependence upon need. A preferred product screen display is shown in Figures 7 & 8 in which a picture of the product to be purchased is shown at 200, basic product information  
5 210 for a particular buying round for the product including product name 211, brand 212, market price 213, internet co-operative discount price 214 and actual/forecast quantity 215, order information and closing date for the buying cycle 216, product specification 220 and details of discounts based on brand and on the sale of the internet co-operative are shown at 230. The portion 230 of the screen is shown in more detail in Fig. 8 in which total  
10 discounts provided to customers who have bought products of a particular brand or through the Internet co-operative are illustrated. The current discount level is indicated at 232, the next higher discount level at 234 and an indication of the total purchases needed to achieve the next discount level at 236.

15 The first component of saving of the described embodiment is in the form of a sliding discounted price (i.e. lower price) due to volume purchase resulting from the aggregation of demands for the same product model and is illustrated with reference to Figure 3. The price mechanism is based a sliding discount formula for volume demand, that is, the discounted price is lower when the aggregated demand is bigger. The final discounted price of a  
20 particular product model offered on the web-site of the Internet co-operative depends on the aggregated demands of members of the Internet co-operative for that particular product model. The objective of giving a sliding discount is to increase the profit yield by attracting substantially more demands (i.e. increase volume). The increase in revenue is more than the discount given because the discount is not given at the expense of profit but from real cost  
25 reductions due to the efficiency of doing business using the internet. The described embodiment allows the buyer to see the aggregated demands needed to achieve the desired final discounted price on-line and in real-time by coding the software needed to determine and display the discounted prices and to facilitate the electronic transactions (that is, purchases or requests) by customers of the Internet co-operative. The information will be

displayed on the electronic terminals such as computers which are electronically networked to the server computer of the internet co-operative.

5 The discounted price for the product model is displayed vis-à-vis the market price to show the saving obtained from buying in volume. The actual method of displaying the discounted price and saving is not an important aspect of this invention. However, the preferred method of display as shown in Fig. 7 is to show the forecasted discounted price based on the forecasted demand (reference numeral 215 in Fig. 7). The forecasted discounted price is conditional on achieving the forecasted demand on the closing date of the buying cycle. For example, the market price for the product model "Odyssey" of the car make "Honda" is \$148,000. The displayed discounted price is \$140,000 giving a saving of \$8,000 which is conditional on achieving the minimum demand of 3 cars on the closing date of the buying cycle. If the demand is more than 3 cars, the price can be lower than \$140,000. If the demand is less than 3 cars, the discounted price will not be valid and buyers will have no obligations.

Figure 3 shows the pricing of for example product model X1.n of Brand X. Product model XM.n means model "n" of the product range "M" of Brand "X". For example Product model scanjet "6300C" of the "scanner" range of products of the "Hewlett Packard" Brand where: "n" = model 6300C, "M"=1=scanner, "X"=Hewlett Packard. In Figure 3 during the buying cycle, a buyer elects to buy product X1.n at step 300. The buying cycle is checked to determine that it is still open at step 310 and if so the incremental demand (price and quantity) is added to the current total demand for product X1.n., Q'n, at summing point 320. The demand will not be accepted if the buying cycle is closed. The new total demand for product X1.n is then Qn which is now stored at 330 for future summation and is used to determine the discounted price  $f_n(Q_n)$  at block 340. The bigger the volume of demand, the lower the price. The discounted price of all the other product models of Brand X are determined in the same manner.

The second component of saving of the present invention is in the form of discounts given to members of the internet co-operative when all the purchases of products of the same brand or supplier are aggregated together. This is illustrated with reference to Figures 4 & 5.

5  
Figure 4 illustrates the mechanism for aggregating the total sales of all the products of the same brand. For example, the total demand for product model XM.1 (e.g. scanjet 6300C) is the discounted price of product model XM.1 multiplied by the total confirmed demand (i.e. number of orders) for product XM.1 as shown at block 400. All other product models  
10 are determined similarly of which XM.n is shown as a generic example at block 410. The total demand for product XM (e.g. scanners) is the aggregate of all the demands for products XM.1 to product XM.n if there are n product models, summed at summing point 420 to provide the aggregate demand at block 430.

15 Figure 5 illustrates the mechanism for determining and displaying in real-time, the discounts for products of the same brand. The aggregated demand for Brand X is the aggregated demand for the whole product range. If there are "M" different types of products like scanners, printers, mouses, monitors, computers and so on of Brand X (for example, Hewlett Packard), the individual products demands X1...XM are given at  
20 430a...430b. These individual product demands are summed at 500 to give a total demand for brand X at block 510. A discount is then calculated as a function of this total demand at block 520. From this calculation is then derived a level of current discount for brand X and an indication of the incremental demand of brand X that is necessary to reach the next highest discount level at block 530, for real time display, for example in the manner  
25 indicated in Fig. 7.

The benefit to the buyers is that a mechanism is provided to get additional savings in the form of a discount from the supplier or manufacturer (i.e. brand) by aggregating the demands for all the products of the same brand. The aggregation of all the products of the  
30 same brand has the advantage of multiplying the aggregated volume substantially than if

the aggregation is for only one particular product model. The benefit to the suppliers or manufacturers is that this method of aggregation provides a mechanism for the suppliers or manufacturers to promote its brand name or products and provides a loyalty program in the form of a discount to attract and retain customers of that particular brand or supplier. The discount for the total aggregated demand will be negotiated from supplier or manufacturer.

The amount of the discount passed on to buyers can be the total amount or a portion of the discount given by the supplier or the manufacturer to the internet co-operative although the mechanism for determining the amount of the supplier's or manufacturer's discount to be passed to the is a matter of choice .

The mechanism on how to distribute the discount to the individual buyer can also be chosen to suit the requirements of the cooperative. As an illustration, one possible mechanism is to give the individual buyer a discount amount proportional to his contribution (i.e. purchases for products of that particular brand) as a percent of the total demand for products of that particular brand which is remitted at the close of the buying cycle to the buyer or may be applied to further purchases.

This component of saving is advantageous for buyers because of the increase in discount and advantageous for suppliers or manufacturers and the internet co-operative because of increase in profit yields by attracting substantially more demand (i.e. increase volume). The discount is chosen so that the increases in revenues are more than the discount given.

The third component of saving of the described embodiment of the present invention is in the form of a discount given to members of the internet co-operative when some (e.g. a plurality of brands) or all the demands of products of the internet co-operative are aggregated together and is illustrated with reference to Figure 6.

The total demand for each particular brand, the goods of which are sold through the internet co-operative is provided from the calculation of Fig. 5 block 510, so for brand A (eg.

Motorola), to which a total demand is given at block 510a and so on up to brand X (for example Hewlett Packard) at block 510b and these total brand demands are summed at summing point 600 to calculate the total demand of the internet co-operative at block 610. A discount, a function of the total demand is then calculated at block 620 of which  
5 calculated at block 630 together with the incremental total demand needed for the next higher level of discount which information may be provided real time on product screens in the manner illustrated in Fig. 7.

The benefit to the buyers is that a mechanism is provided to get additional savings in the  
10 form of a discount from the internet co-operative by aggregating all their demands together. The aggregation of all the products has the advantage of achieving the biggest volume possible. The discount for the total aggregated demand of the internet co-operative will be apportioned from the increased net profit of the internet co-operative. This is advantageous for buyers because of the additional discount and advantageous for the internet co-operative  
15 because of increase in profit yield by attracting substantially more demand (i.e. increase volume). The increase in revenue is more than the profit apportioned for the discount.

The mechanism for determining the amount of net profit to be apportioned to the buyers can be chosen based on need as can the mechanism of how to distribute the discount (i.e.  
20 third component of saving) to the buyer. As an illustration, one possible mechanism is to give the individual buyer a discount amount proportional to his contribution (i.e. his total purchases from the internet co-operative) as a percent of the total demand of the internet co-operative. This may, for example, be remitted to the buyer at the end of the buying cycle or may be applied to future purchases.

25

A preferred feature of the described embodiment is that the current discount for a particular brand is determined and updated instantly and shown on-line and in real-time on the buyer's electronic device such as the computer screen. The total additional demands needed to achieve the next higher level of discount will also be shown. This method of on-line and  
30 real-time display of discount information and feedback is an aspect that adds excitement

and give the buyers on-line and real-time information to encourage the buyers to buy more to reach the next higher level of discount. The on-line and real-time feedback of discount information will also encourage the buyers to find other new buyers to join the internet co-operative so that the next higher level of discount can be reached.

5

The real-time information is displayed to the buyers in two ways, namely: (1) as co-operative domain information which is shown to all buyers as product information and as shown in Figure 8 and (2) as confidential information of the individual buyer in his private account which is password protected. This information is accessed by the buyer through the account summary screen of customer information screen 104 of Fig. 2. An example of the preferred method of displaying the information is shown in Figure 9 although the actual layout of how the information is displayed is not an important aspect of this invention.

The described embodiment also allows the internet co-operative to provide on-line application of credit, insurance, trade-in and other services at a time convenient to the buyer at step 109 of Fig. 2 in such a way so as to keep the buyers at the current logged-on web-site of the internet co-operative to allow the buyers to complete their current electronic co-operative transactions (i.e. purchases or requests) uninterrupted. This allows the buyers to select the specific on-line services (i.e. credit, insurance, trade-in and so on) that he needs while he completes his current electronic co-operative transaction (i.e purchase or request) at the current internet co-operative web-site. The buyer is automatically sent an electronic message such as an email, which contains 1) the electronic link such as the URL address, to the web-site which will allow him to apply for the requested service on-line at any later time that is convenient to him and 2) preparatory information like the necessary documents needed for the on-line application. The buyer then can apply for the requested on-line service at any time by clicking on to the URL address which will bring him to the web-site providing the requested service. In another form, the URL address may be embedded in the logo of the company of the web-site so that the logo of the company instead of the URL address is sent automatically to the buyer in the electronic message or email. This method is illustrated in more details in Figure 10 in which, following for selection of options for



payment in block 109 of Fig. 2, options for different financial services are displayed at block 700. Upon selection of one or more options at block 710, an auto generation of a reply to an email address provided by the buyer is sent. The email includes the URL addresses of at least one company to provide the options selected. The URL address may be  
5 embedded in the logo of the company provided in this e-mail.

Following selection of options, the buyer continues with his transaction confirming method of payment, acceptance of terms and conditions, etc, before logging out at block 110. If the completion of a transaction is subject to approval of a loan or hire purchase using an option  
10 selected in block 710, the transaction is made subject to such approval which is communicated subsequently between the financial service provider and the internet co-operative.

After auto generation of the emails at block 720, the emails are subsequently received by  
15 the buyer at block 800. The buyer may then in his own time access the URL addresses 810, 820, 830 included in the email by clicking on the URL address at block 840, 850, 860 and provide a connection to the appropriate web site of the company providing the requested financial service.

Claims

1. Apparatus arranged to conduct commerce using an electronic network comprising a network location including a database of products to be offered for sale accessible to the purchaser; a discount calculation means arranged to calculate a discount on purchases made by a purchaser via the network location and wherein the discount calculated by the discount calculation means has at least two components, each component being a different function of demand for products sold via the network location.
2. Apparatus as claimed in claim 1 wherein one component of the discount is calculated based on the demand for one product model.
3. Apparatus as claimed in claim 1 or claim 2 wherein one component of the discount is calculated based on the demand for products of one brand.
4. Apparatus as claimed in any one of claims 1 to 3 wherein one component of the discount is calculated based on the demand for products of more than one brand.
5. Apparatus as claimed in any one of the preceding claims wherein one component of the discount is calculated based on the demand for all products purchased via the network location.
6. Apparatus as claimed in any one of the preceding claims wherein the discount calculation means is arranged to calculate the discount based on demand occurring within a fixed time duration.
7. Apparatus as claimed in any one of the preceding claims further comprising discount display means arranged to display the calculated discount.
8. Apparatus as claimed in claim 7 wherein the display means displays the level of discount for each component separately.
9. Apparatus as claimed in claim 7 or claim 8 wherein at least one said component of discount increases in value in a stepwise manner as a function of demand and the display means is arranged to display the current level of discount, the next level of discount and the increase in related demand needed to achieve the next level.

10. A method of conducting commerce using an electronic network comprising the steps of: providing a network location accessible to potential purchasers at which a plurality of products are offered for sale; offering a discount on purchases made by a purchaser via the network location and wherein the discount has at least two components, each component being a different function of demand for products sold via the network location.  
5
11. A method as claimed in claim 10 wherein one component of the discount is calculated based on the demand for one product model.
12. A method as claimed in claim 10 or claim 11 wherein one component of the discount is calculated based on the demand for products of one brand.  
10
13. A method as claimed in any one of claims 10 to 12 wherein one component of the discount is calculated based on the demand for products of more than one brand.
14. A method as claimed in any one of claims 10 to 13 wherein one component of the discount is calculated based on the demand for all products purchased via the network location.  
15
15. A method as claimed in any one of claims 10 to 14 wherein the discount is calculated based on demand occurring within a fixed time duration.
16. A method as claimed in any one of claims 10 to 15 further comprising the step of displaying the calculated discount.
- 20 17. A method as claimed in claim 16 wherein the level of discount for each component is displayed separately.
18. A method as claimed in claim 16 or claim 17 wherein at least one said component of discount increases in value in a stepwise manner as a function of demand and the current level of discount, the next level of discount and the increase in related demand needed to achieve the next level are displayed.  
25
19. Apparatus arranged to conduct commerce using an electronic network comprising a network location accessible to the purchaser including a database of products to be offered for sale; a discount calculation means arranged to calculate a discount on purchases made by a purchaser via the network location and wherein the discount is calculated by the discount calculation means by aggregating the purchases of more  
30

than one product model and calculating the discount on the basis of the aggregated purchases.

20. Apparatus as claimed in claim 19 wherein the discount is calculated based on the aggregated demand for products of one brand.
- 5 21. Apparatus as claimed in claim 19 wherein the discount is calculated based on the aggregated demand for products of more than one brand.
22. Apparatus as claimed in claim 19 wherein the discount is calculated based on the demand for all products purchased via the network location.
23. A method of conducting commerce using an electronic network comprising the  
10 steps of providing a network location accessible to potential purchasers at which a plurality of products are offered for sale; aggregating the purchases of more than one of the products; calculating a discount for the aggregated purchases; and passing the discount on to the purchasers of the aggregated products.
24. A method as claimed in claim 23 wherein the discount is calculated based on the  
15 aggregated demand for products of one brand.
25. A method as claimed in claim 23 wherein the discount is calculated based on the aggregated demand for products of more than one brand.
26. A method as claimed in claim 23 wherein the discount is calculated based on the demand for all products purchased via the network location.
- 20 27. Apparatus arranged to conduct commerce using an electronic network comprising a network location accessible to potential purchasers including a database of products to be offered for sale accessible to the purchaser; a discount calculation means arranged to calculate a discount on a purchase made by a purchaser via the network location and wherein the discount increases as a function of volume of purchases of  
25 the product.
28. Apparatus as claimed in claim 27 wherein the discount increases stepwise.
29. Apparatus as claimed in claim 27 or claim 28 wherein the discount calculation means is arranged to calculate the discount based on demand occurring within a fixed time duration.

30. A method of conducting commerce using an electronic network comprising the steps of providing a network location accessible to potential purchasers at which a product is offered for sale; calculating a discount for the product and passing the discount on to the purchasers of the product; and wherein the discount increases as a function of volume of purchases of the product.
31. A method as claimed in claim 30 wherein the discount increases stepwise.
32. A method as claimed in claim 30 or claim 31 wherein the discount calculation means is arranged to calculate the discount based on demand occurring within a fixed time duration.
33. Apparatus arranged to conduct commerce using an electronic network, the apparatus comprising a network location including a database of products to be offered for sale accessible to a purchaser connected to the network location; a transaction means arranged to process a purchase request by the customer and to provide an indication of at least one service available in association with the purchase; and a message sending means arranged to send the purchaser a separate message including information concerning a selected service while keeping the purchaser connected to the network location.
34. Apparatus as claimed in claim 33 wherein the message includes the identification of a provider of the service.
35. Apparatus as claimed in claim 33 or claim 34 wherein the message includes information required to be provided by the purchaser in relation to the service.
36. Apparatus as claimed in any one of claims 33 to 35 wherein the message sending means is arranged to send the purchaser a separate e-mail message.
37. Apparatus as claimed in claim 36 wherein the e-mail message includes a URL of a provider of the service.
38. Apparatus as claimed in claim 37 wherein the URL is embedded in a logo of the provider provided in the e-mail.
39. Apparatus as claimed in any one of claims 33 to 38 wherein the service is a financial service.

40. A method of conducting commerce using an electronic network comprising the steps of providing a network location accessible to customers at which a product is offered for sale and, in response to a purchase request by the customer, providing an indication of at least one service available in association with the purchase; and  
5 sending the purchaser a separate message including information concerning the service while keeping the purchaser connected to the network location.
41. A method as claimed in claim 40 wherein the message includes the identification of a provider of the service.
42. A method as claimed in claim 40 or claim 41 wherein the message includes  
10 information required to be provided by the purchaser in relation to the service.
43. A method as claimed in any one of claims 40 to 42 wherein the message sending means is arranged to send the purchaser a separate e-mail message.
44. A method as claimed in claim 43 wherein the e-mail message includes a URL of a provider of the service.
- 15 45. A method as claimed in claim 44 wherein the URL is embedded in a logo of the provider provided in the e-mail.
46. A method as claimed in any one of claims 40 to 45 wherein the service is a financial service.
- 20 47. A method of conducting commerce comprising the step of grouping purchases of different purchasers for different products using an electronic network to obtain at least one of improved prices, terms and conditions for the grouped purchases.

1/8

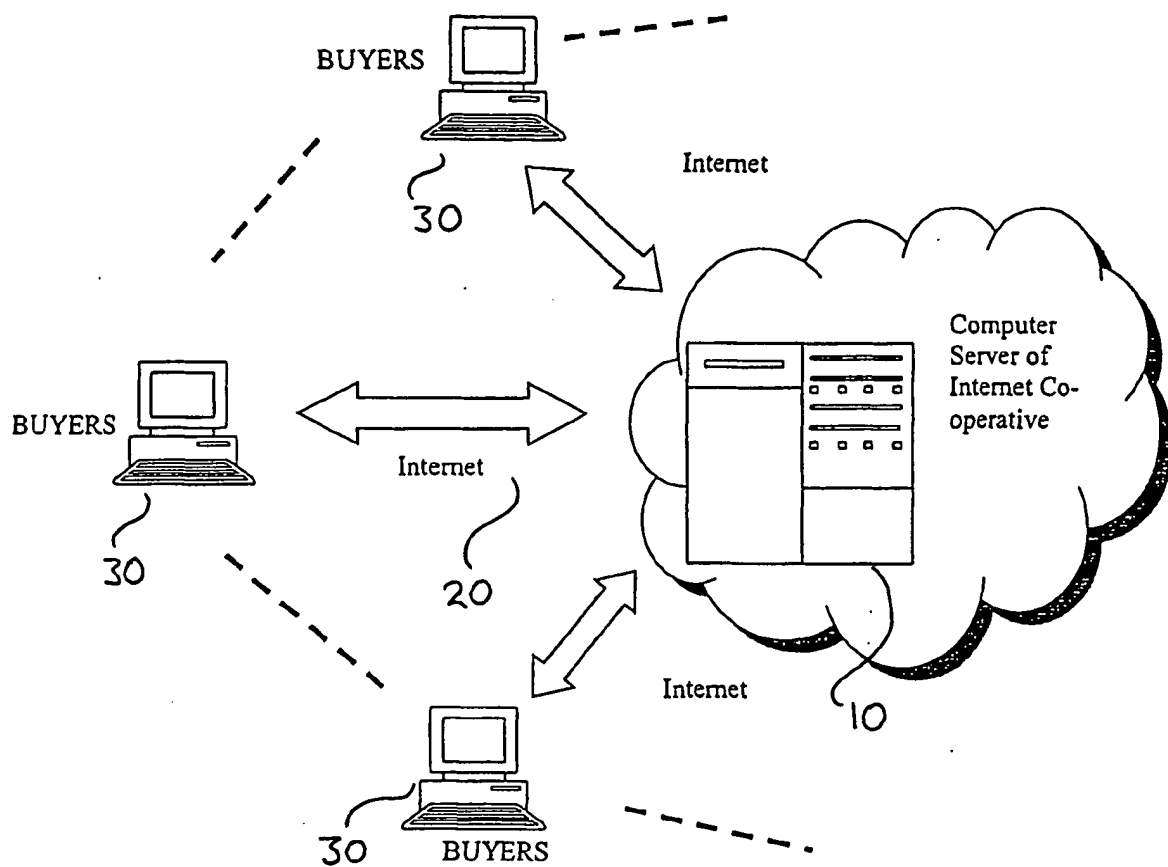


FIG. 1

2/8

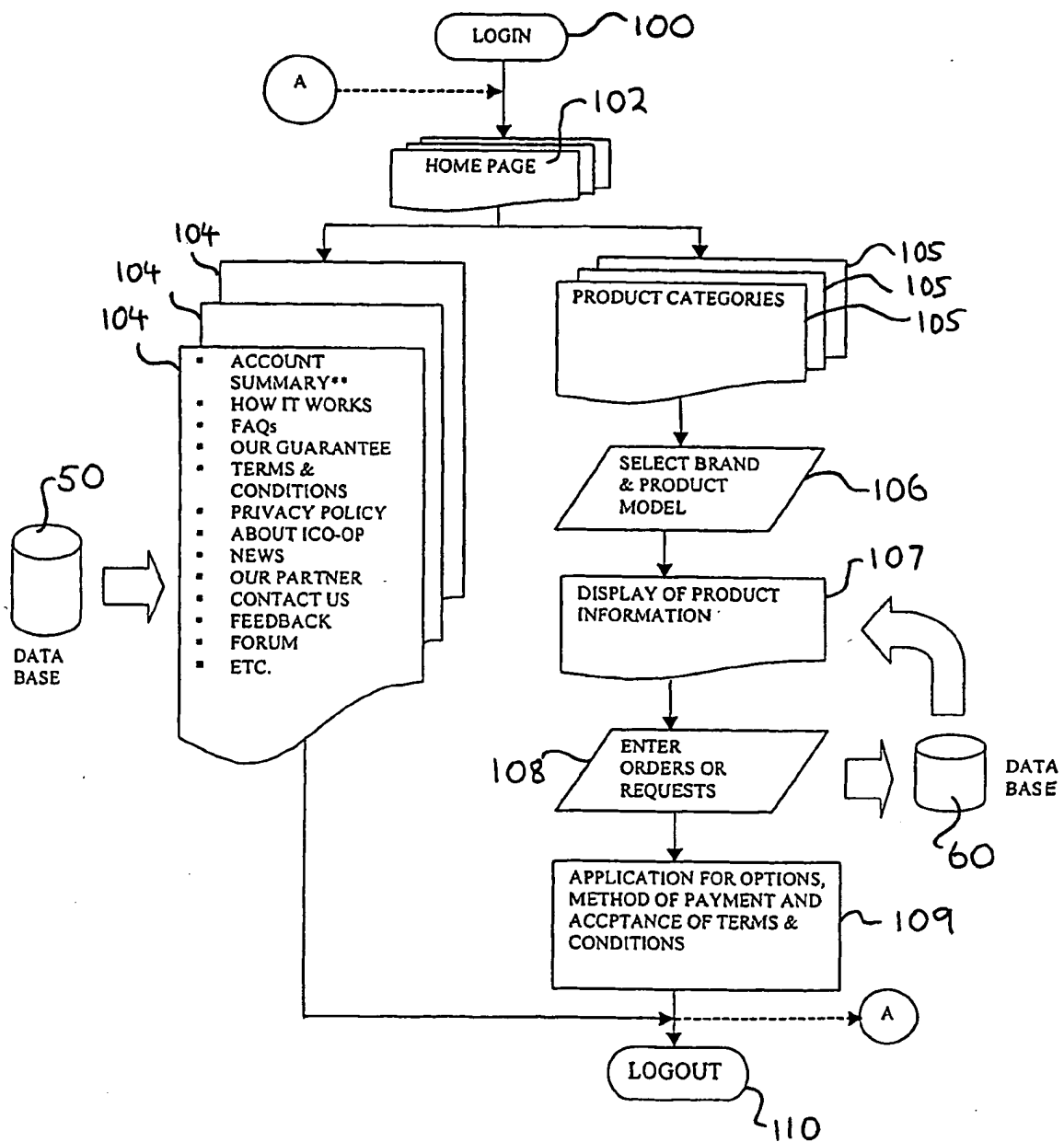


FIG 2



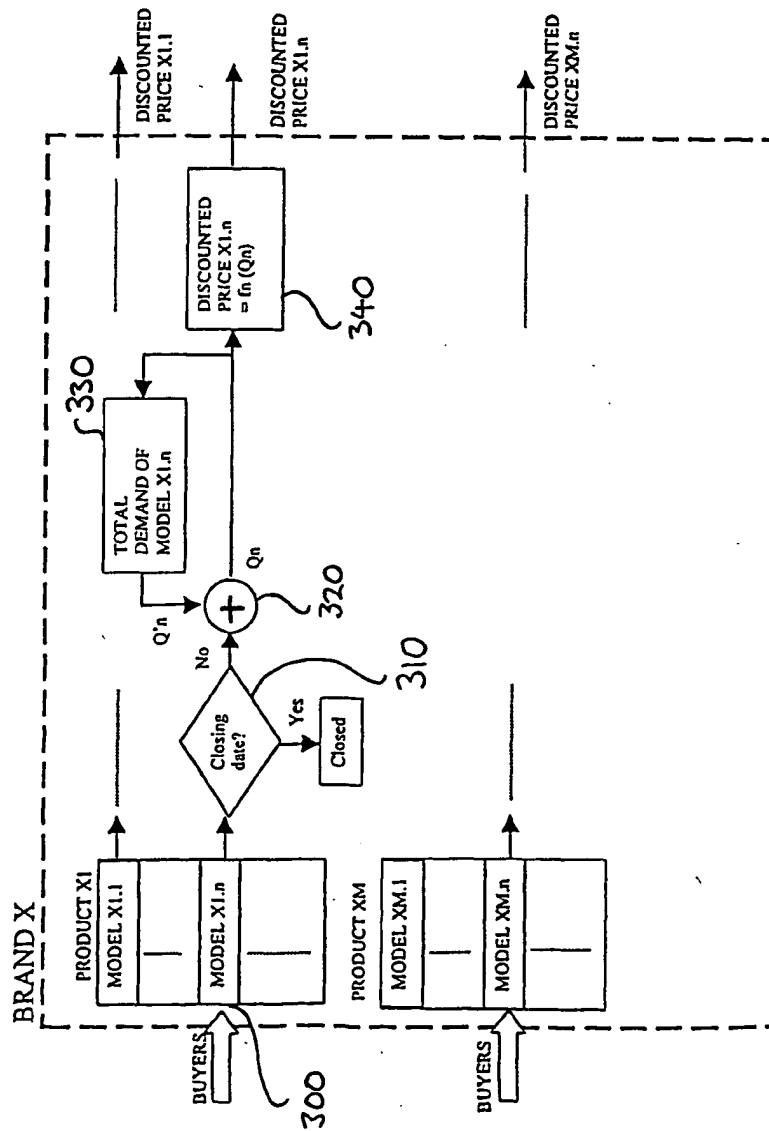


FIG. 3

4/8

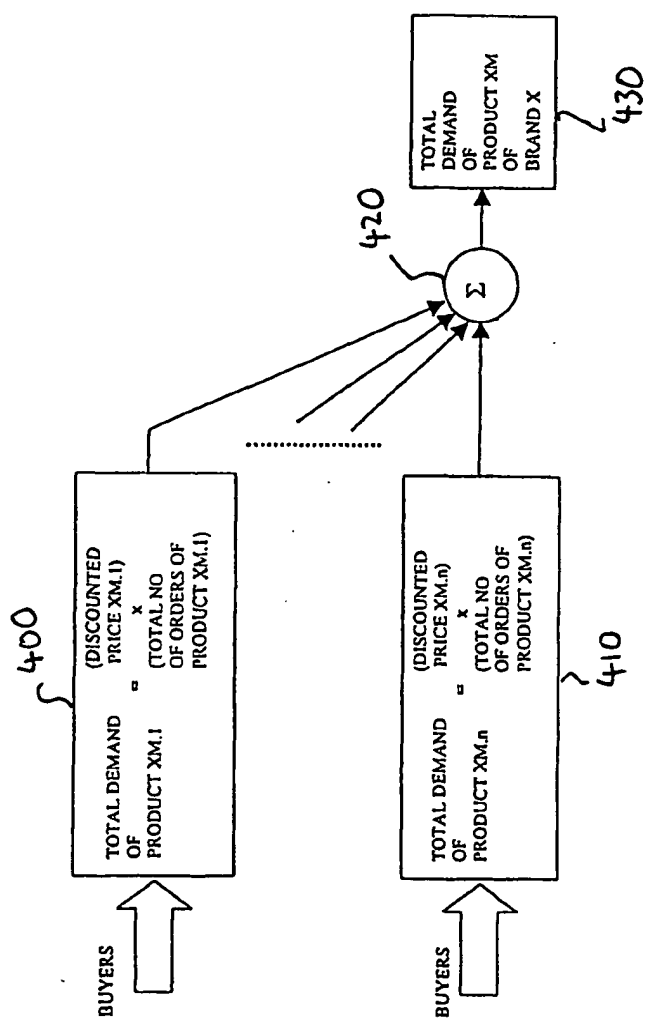


FIG. 4

5/8

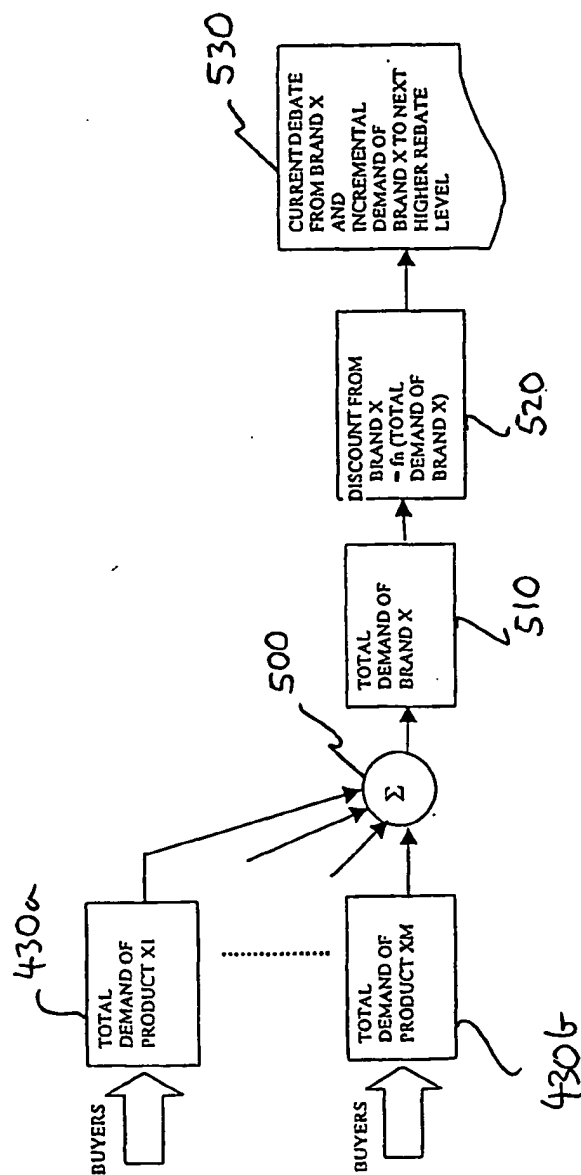


FIG. 5

6/8

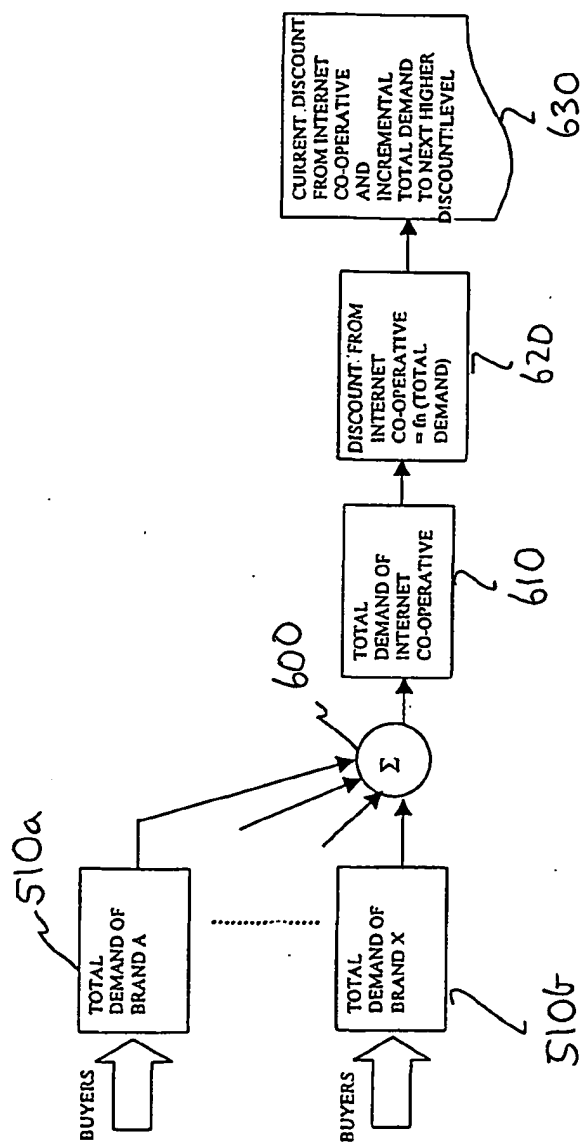


FIG. 6

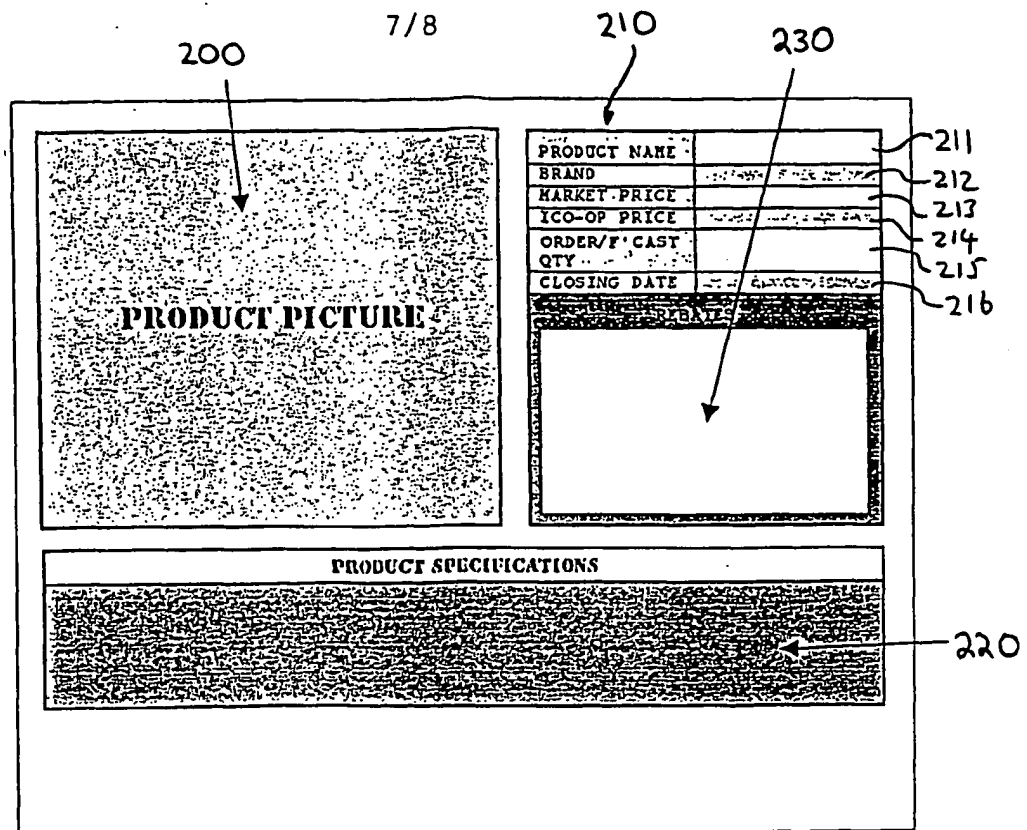


FIG. 7

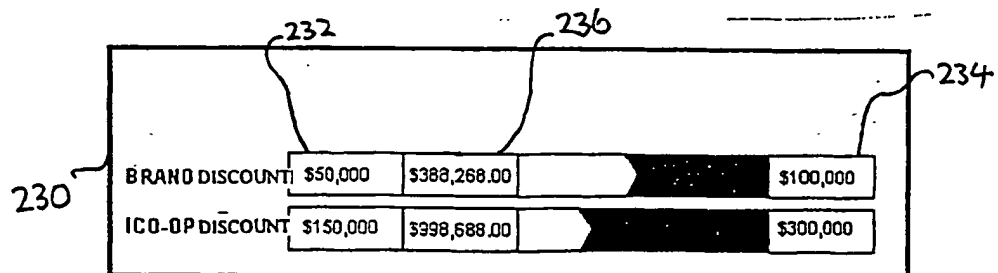


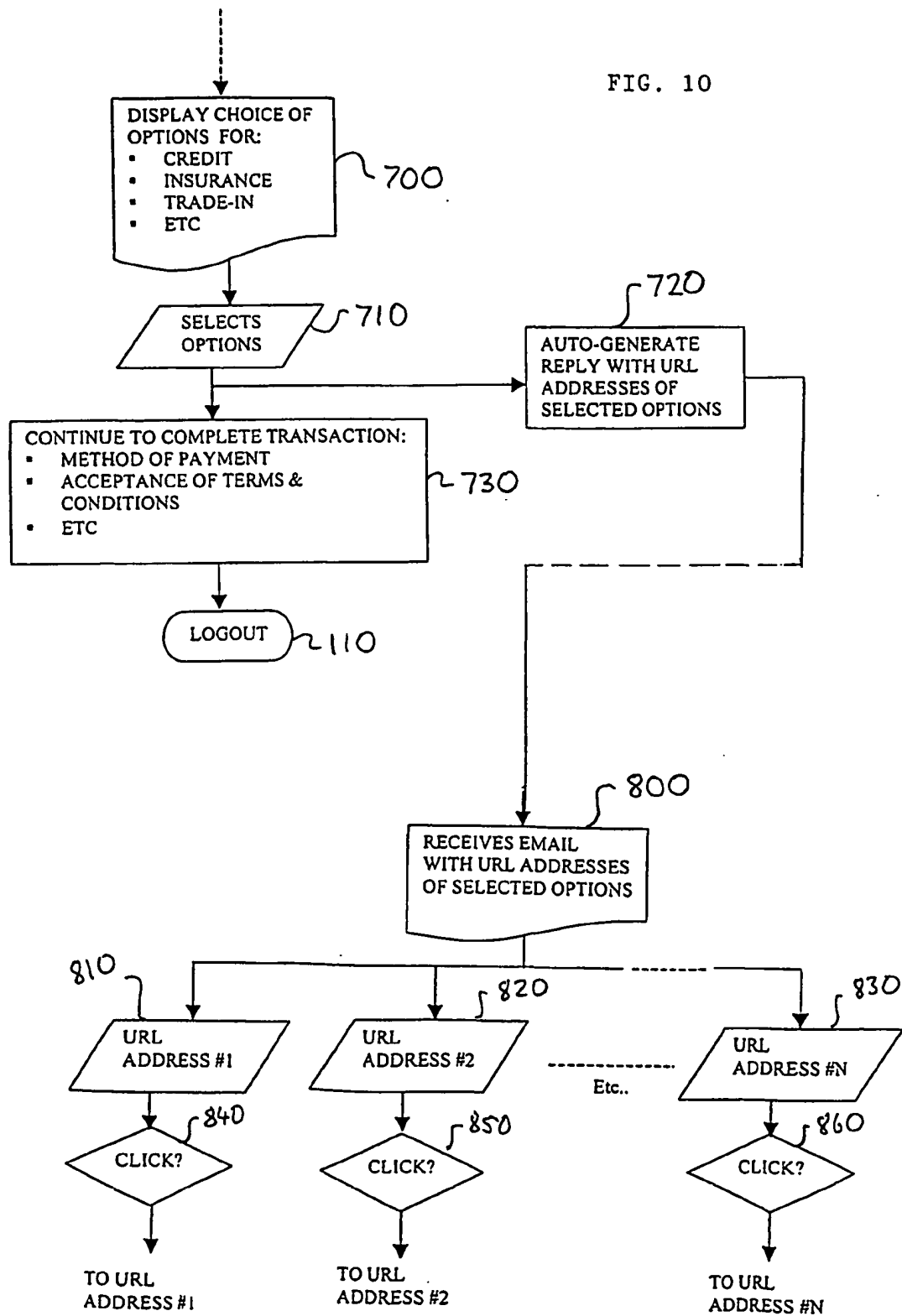
FIG. 8

	CURRENT DISCOUNT	NEXT HIGHER DISCOUNT	MORE TO GO
BRAND X	\$50	\$100	\$138,800.00
BRAND Y	\$75	\$150	\$268,680.00
.....etc	....etc	....etc	....etc
ICO-OP	\$200	\$300	\$926,880.00
TOTAL	\$500	\$1,000	

FIG. 9

8/8

FIG. 10



## INTERNATIONAL SEARCH REPORT

International application No.  
PCT/SG 00/00186

CLASSIFICATION OF SUBJECT MATTER		
IPC <sup>7</sup> : G06F 17/60		
According to International Patent Classification (IPC) or to both national classification and IPC		
B. FIELDS SEARCHED		
Minimum documentation searched (classification system followed by classification symbols)		
IPC <sup>7</sup> : G06F		
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched		
Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)		
WPI PAJ EPODOC		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6047266 A (Van Horn et al.) 4 April 2000 (04.04.00) <i>col. 6, line 56 - col. 9, line 47, claims 7, 9, 10.</i>	1-47
X	WO 00/11570 A1 (Accompany Inc.) 2 March 2000 (02.03.00) <i>page 6, line 2 - page 17, line 32.</i>	1-47
-----		
<input type="checkbox"/> Further documents are listed in the continuation of Box C. <input checked="" type="checkbox"/> See patent family annex.		
<p>* Special categories of cited documents:</p> <p>„A“ document defining the general state of the art which is not considered to be of particular relevance</p> <p>„B“ earlier application or patent but published on or after the international filing date</p> <p>„L“ document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)</p> <p>„O“ document referring to an oral disclosure, use, exhibition or other means</p> <p>„P“ document published prior to the international filing date but later than the priority date claimed</p> <p>„T“ later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention</p> <p>„X“ document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone</p> <p>„Y“ document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art</p> <p>„&amp;“ document member of the same patent family</p>		
Date of the actual completion of the international search		Date of mailing of the international search report
5 June 2001 (05.06.2001)		3 July 2001 (03.07.2001)
Name and mailing address of the ISA/AT		Authorized officer
Austrian Patent Office Kohlmarkt 8-10; A-1014 Vienna Facsimile No. 1/53424/535		SCHLECHTER
		Telephone No. 1/53424/448

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/SG 00/00186

Patent document cited in search report			Publication date	Patent family member(s)			Publication date
US	A	6047266	04-04-2000	AU	A5	00033645	04-10-2000
WO	A	0011570		WO	A2	00055782	21-09-2000
				none			